

XIII. *Notæ Dipterologicae. No. 2.—Descriptions of some new exotic species of Tipulidæ.* By J. O. WESTWOOD, M.A., &c., Pres. Ent. Soc.

[Read 1st March, 1876.]

THE family *Tipulidæ* in its widest extent comprises species which exhibit a wonderful series of modifications in the structure of the antennæ, and especially in the arrangement of the wing-veins. Many years ago I described some interesting forms, allied to the more typical *Tipulæ*, in the *Philosophical Magazine** and in the *Zoological Journal*;† and on the present occasion I have described and figured some curious species of the same division with which our collections have more recently been enriched, including some of the most gigantic Dipterous insects hitherto recorded, the wings of one of the species measuring not less than four inches in expanse, and others more than three inches, whilst the legs of some of the species are disproportionately elongated.

Genus nov. SEMNOTES.

Corpus crassum, pro familiâ valde abbreviatum, thorace antice valde convexo, capite minuto, declivi, supra fere inconspicuo. Oculi prominentes laterales, naso declivi, supra arcuato, apice acuto. Trophi abbreviati, palpis brevibus setosis, articulo basali? minuto, 2^{do} mediocri, apice crassiori, 3^{tio} paullo longiori ante medium parum constricto, 4^{to} longitudine 2^{di}, ultimo fere duplo longiori, apice incrassato. Antennæ minutæ, capite multo breviores, articulo 1^{mo} brevissimo crasso, 2^{do} omnium maximo, 3^{tio} brevi subcylindriciformi, 4^{to} subovali, 5^{to} (ex articulis duobus arete coalitis composito?) minuto conico, tribus reliquis gracillimis, setis longis parum sparsis, ultimo in medio crassiori.

Alæ cellulâ anticâ discoidali elongatâ, venas 4 ad apicem emittenti; cellulâ posticâ elongatâ duas emittenti, cellulâ subapicali venas tres emittenti, quarum antica bifurcata.

* Lond. and Edinb. Phil. Mag., April, 1835, p. 501.

† Zool. Journal, vol. 5, p. 447. 1835.

Pedes graciles longissimi, tarsis gracillimis; posticis tibiis plus duplo longioribus; articulo apicali minimo.

Abdomen crassum, clavatum, segmentis intermediis subito dilatatis; segmento ultimo ventrali apice sinuato, in medio profunde inciso.

Semnotes imperatoria. (Pl. III. fig. 1.)

Pallide stramineo-flava, nigro-variegata, capite cum collo fulvo; oculis antennisque nigris, thorace supra antice nigro, fasciâ transversâ sinuatâ ante alas, maculis duabus lateralibus pone medium, nigris, subtus cum lateribus nigro, maculâ oblongo-ovatâ albâ subtus basin alarum; abdominis segmentis quinque basalibus supra in medio nigris, intermediis nigro-marginatis; ventre plano, pallide albido, apice fulvo maculâ magnâ rotundâ basali, segmentis intermediis in medio et lateribus nigris; alis cinereo-fuscis, basi nigris, venis obscurius marginatis, pedibus nigris; femoribus basi flavis, tibiis flavis, apice nigris.

Long. corp. lin. 13; expans. alar. ant. lin. 38.

Habitat in Australiâ (Melbourne).

In Mus. Britann. et Hopeiano Oxoniæ.

This gigantic Tipulidan differs from the following in its unspotted wings and in its comparatively shorter legs, the anterior tibiae being 9 lines long and the anterior tarsi 14 lines long; the other legs are but very slightly longer than the anterior in the Hopeian specimen.

Semnotes ducalis.

Fulva, nigro-variegata, capite cum antennis fulvo; thorace fulvo antice maculâ mediâ hastatâ, alterisque duabus rotundis humeralibus binisque alteris lateralibus prope alas nigris; abdomine fulvo, segmento basali maculâ discoidali, secundo maculâ in medio marginis postici, segmento 3tio maculâ mediâ lateribusque nigris, 4to fasciâ nigrâ; segmentis mediis magis nigricantibus, posticis fulvis; thorace infra et lateribus sub alas nigris; femoribus nigris, basi fulvis; tibiis fulvis, apice nigris; tarsis nigris; alis dimidio antico fulvo, postico cum apice cinereo-fusco; basi nigra, maculâ ante medium subcostali, fasciâque pone medium obscure cinereo-fuscis; halteribus fulvis, apice nigris.

Long. corp. lin. $10\frac{1}{2}$; expans. alar. unc. $2\frac{1}{3}$; long. ped. postic. unc. 2, lin. 7.

Habitat in Australiâ boreali. (Damell.)

In Mus. Hopeiano Oxoniæ.

This species is smaller than the preceding, and the variegated wings render it much more conspicuous. In the anterior legs the tibiæ are 6 lines and the tarsi are 10 lines long. In the hind legs the tibiæ are 9 lines and the tarsi 16 lines long, of which the basal joint occupies $11\frac{1}{2}$ lines.

Genus OZODICERA.

Ozodicera longipedalis. (Pl. III. fig. 4.)

Elongata, gracilis; naso elongato; castaneo-fusca, thorace antice vittâ mediâ angustâ alterisque duabus lateralibus nigris; antennis gracilibus, 15-articulatis, articulis 4to ad 9um ramos duos breves singulatim emittentibus; 10mo ad ultimum simplicibus; alis hyalinis, venis duabus discoidalibus elongatis, fusco-nebulosis (fusedine in medio anterioris interruptâ) strigisque duabus valde obliquis inter medium et apicem alarum obscure fuscis, cellulâ parvâ subapicali venas 4 simplices emittenti; pedibus longissimis; tarsis posticis tibiis plus duplo longioribus.

Long. corp. unc. $1\frac{1}{6}$; expans. alar. unc. 2; long. cox. et fem. postic. lin. 10; tibiæ post. lin. 11; tars. post. lin. $25\frac{1}{2}$ = unc. 3, lin. $10\frac{1}{2}$.

Habitat in Australiâ.

In Mus. Britann.

The outer dark brown apical fascia extends from the tip of the wing across the terminal veins and the apical margins of the small subapical and posterior discoidal cell, uniting with the dark-clouded posterior longitudinal discoidal vein, which is clouded with brown throughout its whole length to the posterior margin of the wing.

I have referred this insect to the genus *Ozodicera*, Mcq. (= *Hemictaina*, Westw. Zool. Journ. vol. v. p. 450), on account of the similar arrangement of the wing veins, and the slightly ramose structure of the 3rd and five following joints of the antennæ. In the species here described, however, each of these joints emits two short slender branches, and the filiform terminal part of the antennæ consists of six joints (fifteen in all), whereas in the Brazilian type of the genus (*Oz. gracilis*, Westw., l. c.) there are only single branchlets emitted from the intermediate joints, and the terminal portion only consists of four joints (or thirteen in all).

Genus TIPULA.

Tipula Brobdignagia. (Pl. III. fig. 3.)

Obscure luteo-fulva, ore nigro, naso elongato, apice acuto; antennis gracilibus 12-articulatis, articulo basali crassiore, 2do minuto, 3tio et reliquis sensim decrescentibus; thorace antice vittâ mediâ latâ (lineam pallidam centralem includente) maculisque duabus lateralibus nigris, dorso postice in medio vittâ latâ albidâ (e maculis tribus formatâ) notato; alis pallide fuscis, venâ mediâ longitudinali obscuriori, cellulâ parvâ subapicali venas tres extus emittenti, quarum antica bifurcata; pedibus valde elongatis, femoribus et tibiis extremo apice nigris, tarsis præsertim intermediis tibiis longioribus, unguibus minutis elongatis, basi infra dilatatâ et in medio ungue minuto armato.

Long. corp. unc. $1\frac{2}{3}$; expans. alar. unc. 4; long. ped. interm. unc. 3, lin. 11.

Habitat in Chinâ boreali.

In Mus. Britann.

Tipula Mikado.

Obscure fulvo-brunnea, thoracis dorso obscuro; alis pallide fuscis venâ mediâ discoidali longitudinali et basali obliquâ crassioribus, punctoque prope basin obscurioribus fasciâ obliquâ dilutioni fere indistinctâ, inter medium et apicem, pedibus obscure fulvis, femoribus apice nigris. (Mas.)

Long. corp. lin. 15; expans. alar. lin. 38.

Habitat in Japoniâ. (D. Fortune.)

In Mus. Hopeiano Oxoniæ.

Caput luteum lineâ tenui mediâ longitudinali brunneâ, naso elongato. Palpi nigri, articulo ultimo longo, gracili, filiformi. Antennæ fulvo-luteæ, longitudine nasi, 12-articulatæ. Corpus infra cum pedibus et halteribus obscure luteo-fulvum. Thorax supra nigricans, lineis duabus dorsalibus et incisuris ferrugineis. Abdomen segmentis apicalibus supra obscurioribus, ano pallido.

Genus LIMNOBIA.

Limnobia Satsuma.

Capite et thorace supra fusco-griseis, hujus dorso magis rufescenti, abdomine elongato (thorace plus triplo longiori), depresso, fulvo; alis luteo-fulvis, pallide-fusco variegatis; pedibus crassioribus, fulvis; femoribus apice, tibiis, basi

extremâ et apice nigris, capitis naso abbreviato; antennis perbrevibus, 16-articulatis, articulo basali naso paullo longiori, reliquis articulis sensim attenuatis et longe setosis. (Mas.)

Long. corp. lin. 12 (unc. 1); expans. alar. unc. 1½.

Habitat in Japoniâ.

In Mus. Hopeiano Oxoniæ.

The head and thorax are clothed with a fine sericeous coating, giving them a greyish colour. The wings are fulvous, the anterior margin being rather more deeply coloured. The veins are dark fulvous, having a moderate-sized brownish patch towards the base, followed by a small, nearly central spot, and an irregular and much broken bar between the middle and apex of the wings. The legs are comparatively thick, and covered with fine, short hairs. The halteres are luteous buff.

Genus nov. *LIBNOTES*.

Corpus gracile. Caput minutum, globosum, oculis fere totum capitis occupantibus, supra et infra coalitis; nasus mediocris; palpi breves, 4?-articulati. Antennæ breves, graciles, 14-articulatæ, articulo 1mo longiori, 2do brevissimo, reliquis sensim attenuatis, singulo setam longam supra emittenti. Thorax compressus. Abdomen breve, depressum, thorace duplo longius. Alæ elongatæ, angustæ, venis in parte apicali alarum simplicibus (nec furcatis), parallelis; venis analibus gracillimis versus basin curvatis, venâ cubitali unicâ integrâ, venis tribus externo-medianis e cellulâ oblongâ ordinariâ exeuntibus.

Obs.—The venation of the wings in this genus is quite unlike that of any other Tipulideous insect with which I am acquainted. Its peculiarities will be best understood by a reference to the figure of the wing (fig. 6*b*). It is not easy to speculate on the near affinities of so anomalous an insect.

Libnotes Thwaitesiana.

Capite nigro, antennis et palpis fuscis; thorace et abdomine læte testaceo-fulvis; alis limpidis, costâ tenui venisque nigricantibus; pedibus luteis, femoribus anticis (nisi ad basin) nigris, apice femorum aliorum obscuris. (Mas.)

Long. corp. lin. 6; expans. alar. lin. 18.

Habitat Ceylon; meum amicissime communicavit D. Thwaites.

In Mus. Hopiciano Oxonia.

DESCRIPTION OF PLATE III.

- Fig. 1. *Semnotes imperatoria*, nat. size; fig. 1a, antenna.
Fig. 2a. *Semnotes ducalis*, head seen sideways; 2b, wing.
Fig. 3. *Tipula Brobdignagia*, nat. size.
Fig. 4. *Ozodicera longipedalis*; 4a, antenna; 4b, extremity of wing.
Fig. 5a. *Limnobia Satsuma*, antenna; 5b, wing.
Fig. 6a. *Libnotes Thwaitesiana*, head and antenna; 6b, wing.